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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,969	08/04/2003	Robert Joseph Lyons	122049 (GEGRC 0103 PA)	5178
41838	7590	11/02/2005	EXAMINER	
GENERAL ELECTRIC COMPANY (PCPI) C/O FLETCHER YODER P. O. BOX 692289 HOUSTON, TX 77269-2289			POLYZOS, FAYE S	
			ART UNIT	PAPER NUMBER
			2884	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/633,969

Applicant(s)

LYONS ET AL.

Examiner

Faye Polyzos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15, 16 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 14 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-13, 15-16, 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by *Soluri et al* (US 6,734,430 B2).

Regarding claim 1, Soluri discloses a conversion device for use in an imaging system comprising: a first perforated plate portion (1) forming a plurality of collimator channels separated by a plurality of thin collimator walls; a second perforated plate portion (2) forming a plurality of scintillator channels separated by a plurality of thin scintillator walls; reflective coating (24) applied to the inside scintillator surface of the plurality of thin scintillator walls; and a scintillator material filling the plurality of

scintillator channels (20) (See Generally Figs. 1 and 3 and Abstract and col. 2, lines 57-67 and col. 3, lines 1-5 and col. 4, lines 13-39).

Regarding claim 2, Soluri discloses a conversion device for use in an imaging system wherein the first perforated plate portion (1) and the second perforated plate portion (2) are formed from a single perforated plate element (See Generally Figs. 1 and 3).

Regarding claim 3, Soluri discloses the collimator channels comprise a spacing pitch approximately of less than or equal of 2 mm (col. 4, lines 47-50).

Regarding claim 4, Soluri discloses the collimator channels comprises a collimator channel width less than approximately 500 microns (col. 5, lines 5-13).

Regarding claim 5, Soluri discloses the collimator walls comprise a wall thickness of approximately 100 microns (col. 5, lines 5-13).

Regarding claims 6-7, Soluri discloses the scintillator material comprises luminescent glass wherein the glass comprises luminescent material dispersed in a glassy matrix (See Generally Figs. 1 and 3 and col. 4, lines 24-28).

Regarding claim 8, Soluri discloses the luminescent glass comprises a glass ceramic containing crystalline particles (20) (See Generally Figs. 1 and 3).

Regarding claims 9-10, Soluri discloses the scintillator material (20) comprises luminescent polymer which comprises inorganic phosphor particles suspended in a polymer matrix (See Generally Figs. 1 and 3 and col. 2, lines 15-24).

Regarding claims 11-12, Soluri discloses the plurality of thin collimator walls is comprised of a high atomic number metal (i.e. tungsten, lead, gold, tantalum, palladium, etc. (col. 4, lines 13-15).

Regarding claim 13, Soluri discloses the reflective coating of optically reflecting and diffusing material (i.e. TiO<sub>2</sub>) (col. 4, lines 54-63).

Regarding claim 15, Soluri discloses a conversion device for use in an imaging system comprising: a perforated plate (2) forming a plurality of scintillator channels separated by a plurality of thin scintillator walls; reflective coating (24) applied to the inside scintillator surface of the plurality of thin scintillator walls; and a scintillator material (20) filling the plurality of scintillator channels (See Generally Figs. 1 and 3 and Abstract and col. 2, lines 57-67 and col. 3, lines 1-5 and col. 4, lines 13-39).

Regarding claim 16, Soluri discloses a method of manufacturing a conversion device for use in an imaging system comprising: perforating a plate element (2) to form a plurality of scintillator channels separated by a plurality of thin scintillator walls; coating an inside surface of the plurality of scintillator walls with a reflective coating (24); and filling the plurality of scintillator channels with a scintillator material (20) (See Generally Figs. 1 and 3 and Abstract and col. 2, lines 57-67 and col. 3, lines 1-5 and col. 4, lines 13-39).

Regarding claim 18, Soluri discloses grinding the scintillator material such that the scintillator upper surface (2) is planar with a perforated plate upper surface (1) (See Generally Figs. 1 and 3 and col. 5, lines 33-39).

Regarding claim 19, Soluri discloses grinding the perforated plate upper surface such that a perforated plate depth is adjusted (See Generally Figs. 1 and 3 and col. 5, lines 33-39).

Regarding claim 20, Soluri discloses filling the plurality of scintillator channels comprises: forming a block of scintillator material (20) with the perforated plate element embedded within the block of scintillator material; and grinding the scintillator material such that a scintillator upper surface (2) is planar with a perforated plate (1) upper surface (See Generally Figs. 1 and 3 and col. 5, lines 33-39).

Regarding claim 21, Soluri discloses the scintillator material only partially fills the perforate plate element such that a scintillator function is generated by the scintillator material and a collimator function is generated by an unfilled portion (See Generally Figs. 1 and 3).

***Allowable Subject Matter***

4. Claims 14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding dependent claim 14, the prior art, as stated supra, does not disclose or fairly suggest a conversion device for use in an imaging system wherein the scintillator material comprises a luminescent material that does not decompose when dispersed in molten glass, the luminescent material suspended in the molten glass.

Regarding dependent claim 17, the prior art, as stated supra, does not disclose or fairly suggest a method of manufacturing a conversion device for use in an imaging

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system wherein the filing the plurality of scintillator channels comprises: heating the scintillator material to a slumping temperature such that the scintillator material fills the plurality of scintillator channels.

**Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Polyzos whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FP

OTILIA GABOR  
PRIMARY EXAMINER  
